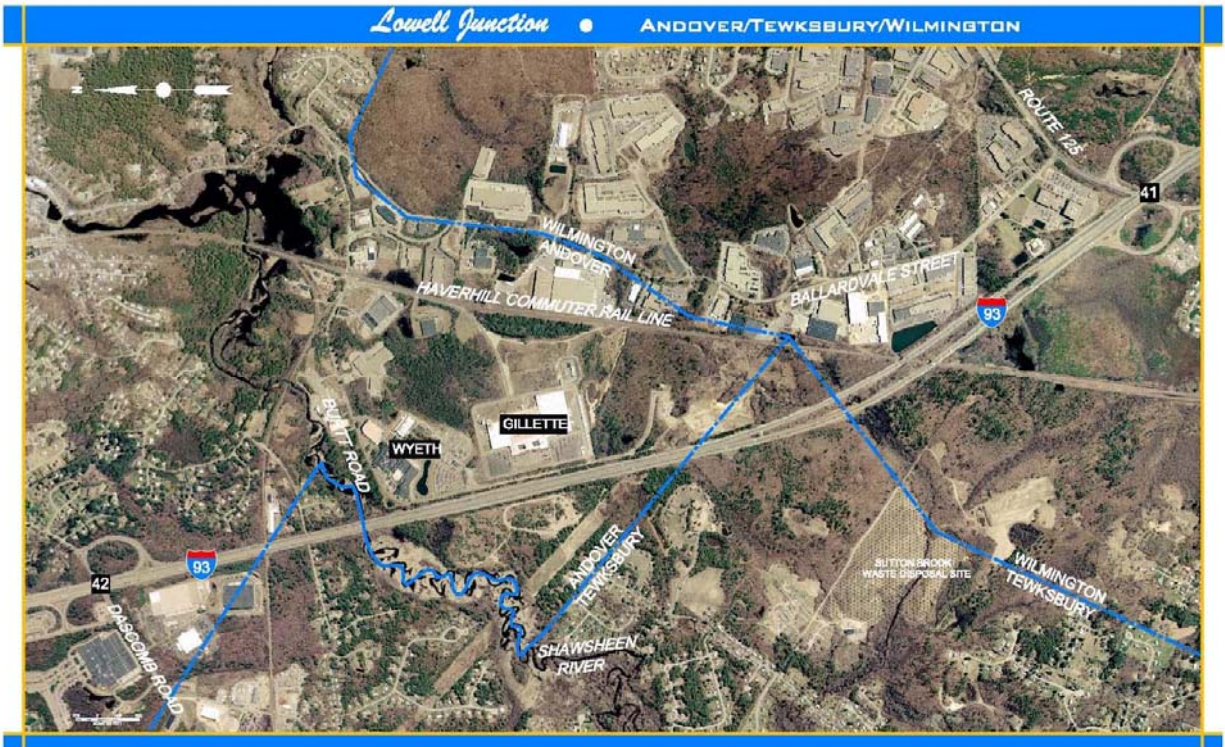


# Town of Andover, Massachusetts

## Lowell Junction Interchange Task Force



## Preliminary Review of I-93 Interchange Alternatives May 22, 2006

Prepared for:

**Town of Andover – Board of Selectmen**

Prepared by:

**Town of Andover - Lowell Junction Interchange Task Force**

Christian Huntress, Chairman  
Terry Szold  
Douglas White  
Jay Corey  
Alex Chanler

Mr. Alex Vispoli, Chairman  
Andover Board of Selectmen  
Town of Andover  
36 Bartlet Street  
Andover, MA 01810

Re: Lowell Junction Interchange Task Force – Review of Interchange Alternatives.

Dear Mr. Vispoli;

Enclosed is the final report of the Lowell Junction Interchange Task Force (LJITF) including our review of alternative designs for the proposed I-93 interchange in Lowell Junction. The alternative design options and associated traffic engineering data were prepared by the Merrimack Valley Planning Commission (MVPC) and their independent traffic consultant, Vanasse Hangen Brustlin (VHB).

Since you have appointed the LJITF in March of 2006 we have worked diligently to gather information, meet with all stakeholders, solicit public input and draft what I consider to be a fair and balanced review of the nine (9) alternative interchange designs provided by the MVPC. As per our charge from your Board, we have tried to highlight the potential benefits and impacts to the Town of Andover through the creation of a new break in access on I-93 and the associated industrial/commercial and retail growth expected to occur as a result.

Throughout the last three months we have met with representatives of the MVPC, VHB, Massachusetts Highway Department, Federal Highway Administration, Towns of Tewksbury and Wilmington, Wyeth, Proctor Gamble, RJ Kelly, State Senator Susan Tucker, State Representatives Barry Finegold and Barbara L'Italien and many concerned Andover residents. As you can imagine, not all parties have the same interests in this issue, but we have tried to give equal time for all sides to voice their opinion and be heard on the matter. To that end we have hosted two Public Information Sessions in the Town of Andover. The first was held on May 2, 2006 at the Public Safety Center. This initial meeting provided the opportunity for a thorough presentation of the nine alternatives by MVPC/VHB, and an opportunity for questions and comments regarding the same from the LJITF, area businesses, residents, and officials. With over 100 people in attendance the presentation and ensuing debate regarding the benefits and impacts were both informative and respectful. The second Public Information Session hosted by our Task Force was held on May 11, 2006, again at the Andover Public Safety Center. The LJITF took this opportunity to present answers to several important questions raised at the previous hearing, and allowed ample opportunity for public comment and questions regarding the design alternatives and our process in reviewing those options on behalf of the Town of Andover. Finally, after listening carefully to all concerns, the LJITF took the opportunity to publicly discuss and debate the nine alternatives and voted to move several forward for further consideration to the MVPC, Massachusetts Highway Department and the Federal Highway Administration. The results of our votes and the recommendations for further action are contained in the body of this report.

The MVPC has given the Town of Andover until June 1, 2006 to provide public review and input to their Interchange Justification Report being issued to the Federal Highway Administration. As you are aware, the benefits and impacts of this important project are not always easy to quantify. At times we did not always feel we had the information needed to answer all our questions. You will note that many of the

recommendations provided by the LJITF suggest that additional study is required to better determine the true impact to the Town of Andover resulting from expanded growth in Lowell Junction. We further recognize that our study of the alternatives is not a final review, but rather a first step in what will likely be a long process. The final design will still have to go through full engineering, peer review evaluations, environmental permitting, and then wait for available funding from State and Federal Agencies before construction could begin. However, it is important that this process move forward. It was very clear to me through the comments offered by Andover residents and businesses that a break in access to I-93 is long overdue in Lowell Junction. As a resident of BallardVale I agree with that sentiment. It is time for a new interchange to service Lowell Junction, but Andover needs the right interchange. The wrong interchange and associated roadway design could facilitate unintended sprawl of retail/commercial growth in neighboring communities, and Andover's local roads may well become the only outlet for the traffic impacts associated with that expanded growth.

I encourage your Board to continue to work with the MVPC and the Towns of Tewksbury and Wilmington in advancing this issue forward for careful study. I thank you for the opportunity to allow me to provide input into this project, and I look forward to discussing the recommendations of our study with you in the very near future.

Sincerely;

A handwritten signature in black ink, appearing to read "Christian C. Huntress", with a stylized flourish at the end.

Christian C. Huntress  
LJITF, Chairman

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## 1. INTRODUCTION

### Background.

*The Lowell Junction/Route 93 Development Area* represents one of the largest concentrations of employment in Northeastern Massachusetts. Situated between Exit 41 (Route 125) and Exit 42 (Dascomb Road), a Lowell Junction Interchange has the potential of opening up hundreds of acres of currently landlocked and grossly underutilized industrial land as well as allowing for expansion of existing industries in the area, which are constrained by poor access to the interstate.

Over the past twenty years, the Town of Andover has been unsuccessful in its attempt to obtain approval for an interchange at the Lowell Junction area to service facilities currently occupied by Gillette/Proctor & Gamble, Wyeth Biotech, Charles River Labs, AGFA Films and other existing businesses employing approximately 6,000 workers. The failure to obtain such approval has impeded the expansion of those companies, most notably Wyeth Biotech. Several attempts have been made by the Town of Andover to construct new on and off ramps to connect to northbound lanes of I-93 to the Burt Road extension; however, these requests have repeatedly been denied, citing the proposed improvements at the Route 125/BallardVale Road interchange and the failure of the ramps to constitute a “Full Interchange.”

Recognizing the potential economic development benefits that may result from a new interchange in this area, the three communities Andover, Tewksbury and Wilmington have agreed to pursue the approval, design and construction of a new full-service interchange at The Junction Development Area, between Exits 41 & 42.

In 2001-2003 the Merrimack Valley Planning Commission (MVPC) with funding from Mass Highway and FHWA undertook an “Interstate 93 Corridor Study,” which examined the feasibility of widening I-93, providing improvements to the interchanges along the I-93 corridor and adding a new interchange in the Lowell Junction area between Exit 41 (Route 125) and Exit 42 (Dascomb Road).

While the Corridor Study focused on the engineering feasibility of providing an interchange between exits 41 and 42 and had concluded that a Lowell Junction interchange was feasible, Mass Highway and Federal Highway Administration (FHWA) had recommended to MVPC that further analysis of a Lowell Junction interchange be investigated. Rather than include these additional interchange analyses as part of the I-93 Corridor Traffic Study, Mass Highway and FHWA requested preparation of a stand-alone document evaluating alternatives for a new interchange. In response to Mass



Highway and FHWA, MVPC prepared a scope of services to conduct an interchange justification study and to create an Interchange Justification Report (IJR).

In short, the scope for the IJR includes an analysis of up to ten roadway concepts, traffic volumes, traffic operations, construction cost estimates, environmental impacts, safety issues along the mainline (I-93) and address how each interchange alternative would satisfy the eight requirements as established by the FHWA for a break in access. The consulting firm of Vanasse Hangen Brustlin, Inc. (VHB) was awarded the contract to perform the scope of services and assist the MVPC in preparation of the IJR. MVPC hopes to issue an Interchange Justification Report by June 1, 2006 with comment provided by the Town of Andover.

### **Lowell Junction Interchange Task Force - Scope of Work.**

- Establish a five (5) member committee to represent Andover's interest in the development of interchange alternatives to the I-93 corridor in the Lowell Junction Area.
- Review nine (9) existing alternative designs for interchange configurations to determine the best alternative for the Town of Andover.
- Coordinate this review with MVPC and the adjacent Towns of Tewksbury and Wilmington.

### **Lowell Junction Interchange Task Force - Review Criteria.**

The following review criteria were established by the LJITF at the outset of this study. The LJITF felt it was important to evaluate each of the alternatives against the same set of criteria. This review is intended to provide a fair and balanced understanding of what the Town of Andover can expect to realize in regard to the short term and long term impacts from the proposed construction. Specifically, the criteria established below are intended to provide a better understanding of how the proposed interchange would impact Andover's businesses, adjacent residential neighborhoods, economic development opportunities, environment and overall quality of life.

#### **Review Criteria**

1. Provide immediate and direct access from Route 93 to existing businesses in the Lowell Junction Area.

2. Improve traffic conditions in existing residential neighborhoods and collector roads adjacent to the Lowell Junction Area.
3. Maximize the economic development potential for the Lowell Junction Area, while insuring that the preferred alternative protects the environment and enhances the overall quality-of-life for all residents.
4. Avoid deterioration of level of service benefits obtained or expected from recently improved intersections and roadway projects (Such as the Route 125 slip ramp to I-93 north)
5. Avoid adverse impact to Andover's vibrant Downtown Commercial Area.
6. Avoid excessive construction cost and/or long-term maintenance cost for the Town of Andover.

### **Federal Highway Administration - Review Guidelines.**

The following review guidelines are outlined by the FHWA in their review of a new break in access to an interstate highway system. The LJITF has been informed by MVPC, VHB and representatives of the FHWA that the following criteria are "guidelines" and not requirements. As such these guidelines are open to interpretation and may be understood to mean different things to the Local, State and Federal Authorities.

1. Existing roadways do not provide the necessary access and can not be improved to accommodate design year traffic.
2. All reasonable alternatives have been assessed.
3. There is no significant adverse impact on safety and operation of the highway.
4. The access connects to a public road and provides for all traffic movements.
5. The proposal is consistent with local and regional plans.
6. Potential for multiple interchange additions has been addressed.
7. Coordination between development and transportation improvements is demonstrated.
8. Request for new access contains information on environmental processing.

## 2. PRELIMINARY I-93 INTERCHANGE ALTERNATIVES

### ALTERNATIVE #1. – NO BUILD

#### Pros & Cons

- Access to west side parcels only.
- No direct access to I-93.
- No access between east side and west side of I-93.
- Limited development potential.
- No landfill, transit or park & ride access.
- Significant wetlands & floodplain impacts.
- Traffic impacts on Salem Street.
- Added traffic in BallardVale & Route 125
- Lowest Cost

#### Overview

This alternative does not provide an interchange or otherwise propose a connection to I-93. The roadway connection in this alternative provides access to land on the west side of I-93 only, and runs south along the MBTA Commuter Rail Line to Salem Street in Wilmington. The roadway also runs through an existing hardwood / Red Maple swamp as shown in the adjacent aerial photo. The environmental impacts and impact to traffic on local roads are too significant for this alternative to warrant further consideration.

#### Task Force Recommendation

The LJITF voted unanimously NOT to advance this option for further consideration.



*Alternative #1. – No Build Option*



## **ALTERNATIVE #2. – NO BUILD**

### **Pros & Cons**

- Access to west side parcels.
- No direct access to I-93.
- Limited development potential.
- No landfill, transit or park & ride access.
- Minor environmental impacts.
- Substantial traffic impact on River Street, BallardVale Street and at Exits 41 & 42.
- Lowest cost.

### **Overview**

The roadway connections in this alternative do not provide access to I-93 and open up significant undeveloped and under-developed land for new commercial / industrial growth. The impacts on local roads under this alternative are too significant to warrant further consideration.

### **Task Force Recommendation**

The LJITF voted unanimously NOT to advance this option for further consideration.



*Alternative #2 – No Build Option*

### **ALTERNATIVE #3. – TRUMPET DESIGN**

#### **Pros & Cons**

- No access to west side parcels.
- Full access to I-93 from east side only.
- Limited development potential.
- Transit and park & ride access from I-93.
- No landfill access from I-93.
- Minor environmental impacts.
- Reduced traffic on River Street, BallardVale Street and at Exits 41 and 42.
- Lowest cost.

#### **Overview**

This roadway connection provides full access to both I-93 north and south from the east side of Route I-93. Because the development potential is limited to only the east side of I-93, the associated traffic impacts on both the main line and local road will also be reduced. At a recent MVPC meeting, the LJITF was also made aware that Mass Highway suggested they would like to see this alternative moved forward for further consideration.

#### **LJITF Recommendation**

The LJITF voted unanimously to ADVANCE this option for further consideration.



*Alternative # 3 – ‘Trumpet Design’*

## **ALTERNATIVE #4. – ‘DIAMOND DESIGN’**

### **Pros & Cons**

- Full west side and east side access to I-93.
- Full development potential.
- I-93 access to landfill and potential transit or park & ride facilities.
- Some wetlands impacts.
- Southbound off-ramp adjacent to Jennies Way.
- Reduced traffic on River Street, BallardVale Street and at Exits 41 and 42.
- Increased traffic on South Street.
- Higher cost.

### **Overview**

The roadway and interchange design shown in this alternative provide for better, more immediate and direct access to the Lowell Junction Area, including the campuses of both Wyeth and Proctor Gamble (Gillette). The traffic volume and LOS impact data provided by VHB / MVPC<sup>1</sup> also show a significant benefit to local roads in Andover, including the Dascomb Road, Route 125 and BallardVale neighborhoods. This preliminary data provided by VHB / MVPC also shows a reduced cost and lower impact to the environment than some of the other alternatives which are being more seriously considered. The review and benefits of this alternative are expanded upon in the following chapter, please refer to Chapter 3, Outstanding Issues & Concerns for additional information.

### **LJITF Recommendation**

The LJITF voted unanimously to ADVANCE this option for further consideration.



*Alternative #4 – ‘Diamond Design’*

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<sup>1</sup> Lowell Junction Interchange 2025 Roadway Volume Comparisons - Weekday Morning/Afternoon Peak Hour  
Provided by VHB and MVPC on 3/14/06



## **ALTERNATIVE #5. – ‘DIAMOND DESIGN’**

### **Pros & Cons**

- Full west side and east side access to I-93.
- Full development potential.
- Access to landfill, transit or park & ride facilities.
- Significant wetlands and floodplain impacts.
- Southbound ramp adjacent to Jennies Way.
- Reduced traffic on River Street, BallardVale Street and at Exits 41 and 42.
- Increased traffic on Salem Street.
- Higher cost.

### **Overview**

The roadway and interchange design shown in this alternative is identical to Alt. #4, with the exception that a connection to Salem Street in Wilmington is shown to accommodate the FHWA criteria of having access to public roads. The environmental impacts and impact to traffic on local roads are too significant for this alternative to warrant further consideration.

### **LJITF Recommendation**

The LJITF voted unanimously NOT to advance this option for further consideration.



*Alternative # 5 – ‘Diamond Design’*

## **ALTERNATIVE #6. – ‘DIAMOND DESIGN’**

### **Pros & Cons**

- Full west side and east side access to I-93.
- Full development potential.
- I-93 access to landfill and potential transit or park & ride facilities.
- Significant wetlands and 4(f) property impacts.
- Southbound off-ramp adjacent to Jennies Way.
- Reduced traffic on River Street, BallardVale Street and at Exit 42.
- Added traffic on Route 125 at Exit 41.
- Higher cost.

### **Overview**

The roadway and interchange design shown in this alternative is identical to Alt. #4, with the exception that a connection to Exit 41, (Route 125) is shown to accommodate the FHWA criteria of having access to public roads. The LJITF felt that the traffic impact to Route 125 and the surrounding neighborhoods was significant in this alternative. Further, the LJITF is concerned with the impacts of constructing a road across the MBTA Commuter Rail Line and through a 4(f) conservation parcel. The environmental impacts and impact to traffic on local roads are too significant for this alternative to warrant further consideration.

### **LJITF Recommendation**

The LJITF voted unanimously NOT to advance this option for further consideration.



*Alternative # 6 – ‘Diamond Design’*



## **ALTERNATIVE #7. – ‘LOOP DESIGN’**

### **Pros & Cons**

- Full west side and east side access to I-93.
- Full development potential.
- I-93 access to landfill and potential transit or park & ride facilities.
- Some wetlands impacts.
- Reduced traffic on River Street, BallardVale Street and at Exits 41 and 42.
- Added traffic on Lowell Junction Road.
- Highest cost.

### **Overview**

The roadway and interchange design provided by this alternative connect the Lowell Junction area to I-93 with a circuit road. This alternative provides full access to I-93 and crosses the highway with two (2) bridges, located on both the northern and southern boundary of the study area. It is important to note that the only connection to a local road is found along the east side of I-93 at the proposed Burt Road extension and at Lowell Junction Road. The northern-most bridge crosses I-93 in close proximity to the Wyeth campus, and how that ramp would be resolved with Lowell Junction is unclear. The LJITF remains concerned about the travel time required for an employee in Lowell Junction to arrive at their destination. Further, the traffic impact data provided by MVPC and VHB<sup>2</sup> show a greater impact of volume and a corresponding reduction in LOS throughout residential neighborhoods as a result of the increased travel time associated with the circuitous design.



*Alternative # 7 – ‘Loop Design’*

### **LJITF Recommendations**

The LJITF voted unanimously NOT to advance this option for further consideration

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<sup>2</sup> Lowell Junction Interchange 2025 Roadway Volume Comparisons - Weekday Morning/Afternoon Peak Hour  
Provided by VHB and MVPC on 3/14/06

## **ALTERNATIVE #8. – ‘LOOP DESIGN’**

### **Pros & Cons**

- Full west side and east side access to I-93.
- Full development potential.
- I-93 access to landfill and potential transit or park & ride facilities.
- Significant wetlands, floodplain, and 4(f) property impacts.
- Reduced traffic on BallardVale Street and at Exit 41.
- Added traffic on Dascomb Road at Exit 42.
- Highest cost.

### **Overview**

Similar to the previous scheme, the roadway and interchange design provided by this alternative connect the Lowell Junction area to I-93 with a circuit road. This alternative provides full access to I-93 and crosses the highway with two (2) bridges, located on the northern and southern boundaries of the study area. The addition of a local connection on the west side of I-93 to Dascomb Road, across the Shawsheen River, is what makes this alternative unique. The LJITF felt that although a connection to a local roadway system on the west side of I-93 is important, the environmental impact of crossing the Shawsheen River is too great for this alternative to warrant further consideration.

### **LJITF Recommendation**

The LJITF voted unanimously NOT to advance this option for further consideration.



*Alternative # 8 – ‘Loop Design’*

## **ALTERNATIVE #9. – ‘MODIFIED LOOP DESIGN’**

### **Pros & Cons**

- Full west side and east side access to I-93
- Full development potential
- I-93 access to landfill and potential transit or park-and-ride facilities
- Some wetlands impacts
- Limited traffic reduction on River Street/Possible BallardVale traffic calming
- Reduced traffic on BallardVale Street and at Exits 41 and 42
- Highest cost

### **Overview**

The ‘Modified Loop’ alternative grew from revisions to the previous two ‘Loop’ alternatives. The roadway and interchange design is similar to that found in Alt. #7, with the elimination of the northern most bridge near the Wyeth Campus. This final alternative provides full access to I-93, and opens surrounding property in the Lowell Junction area for new development. As in the previous two alternatives no connections to local roads have been made in either Tewksbury or Wilmington. The only connection to a local road is provided on the west side of I-93 at the proposed Burr Road Extension. The LJITF remains concerned about this ‘Modified Loop’ alternative because of a variety of issues, including; 1. Compliance with FHWA Guidelines; 2. Impact to traffic and LOS on local neighborhoods, including Dascomb Road, BallardVale and Route 125; 3. Long Term Land Use and Build-out implications; 4. Impact to Andover’s Downtown Commercial District, and 5. Potential Environmental Impacts.



*Alternative #9 – ‘Modified Loop Design’*

### **LJITF Recommendations**

A majority of the LJITF initially voted NOT to advance this option for further consideration. The LJITF then reconsidered and voted unanimously to ADVANCE this option for further consideration with ‘serious concerns’. The concerns regarding this alternative are outlined above, and further expanded upon in Chapter 3, Outstanding Issues & Concerns.



### 3. OUTSTANDING ISSUES AND CONCERNS.

#### a. **Compliance with FHWA Review Guidelines**

The FHWA offers eight guidelines in determining the need for a new break in access to an interstate highway system. The LJITF offers the following thoughts and concerns regarding our understanding of the intent of the FHWA guidelines as they may apply to the alternative interchange designs proposed by MVPC/VHB.

**1. Existing roadways do not provide the necessary access and can not be improved to accommodate design year traffic.**

Regardless of the alternative considered, there is no argument to the fact that existing roads providing access to Lowell Junction are insufficient, and could not be improved to accommodate the design year traffic.

**2. All reasonable alternatives have been assessed.**

The MVPC & VHB put forward nine (9) alternative interchange designs. The LJITF has voted to advance three for further consideration. Although the nine original alternatives were thorough and provided many answers, they raised many questions regarding impacts and benefits to the Town of Andover. The LJITF expects that the continued process will modify several of the alternatives in response to the concerns raised in this report.

**3. There is no significant adverse impact on safety and operation of the highway.**

Under all alternatives the Level of Service (LOS) on the main line (I-93) shows failure during peak AM and PM hours. However, it is worth noting that the existing conditions also provide a failure in LOS during the same time periods.

**4. The access connects to a public road and provides for all traffic movements.**

This matter is the issue which presented the most debate from all interested parties throughout our review. The Town of Tewksbury has stated in their development agreement with the Mills Corp., and in their rezoning for the property in question, that no connections to local roads will be allowed within the Town of Tewksbury. As a result, the only connections to local roads are proposed to be on the east side of I-93, in the Town of Andover. Is it fair that a neighboring town could rezone residential land to a high traffic destination retail use and not expect to get

any of the impact? Since many of the alternatives open development opportunities on both sides of the highway does the FHWA require access to public ways on both the east and west sides? Alternative #9, the “Modified Loop” relies upon the assumption that the circuit roadway constructed for the interchange will meet the definition of a “public roadway” on the west side of I-93. However the only true connection to an existing public road for this alternative is found on the east side of the highway in the Town of Andover. Does this design satisfy the requirements and guidelines provided by FHWA? To date the LJITF has not been able to get answers to these important questions. We have voted to advance several alternatives for further consideration but have serious concerns about the development of an alternative which only provides a local connection on the east side of I-93.

**5. The proposal is consistent with local and regional plans.**

In 2004, the Vision 21 Committee prepared a “Vision for the Town of Andover” report that articulated important goals, strategies, and objectives for the future evolution of Andover. An Andover Community Development Plan was also prepared at this time. While both reports target the development of transportation improvement, including a new I-93 interchange for Lowell Junction, they suggest also that the Town of Andover should “*Advocate for public transit and highway access that reduces traffic in and through residential neighborhoods.*” Any final interchange design for Lowell Junction advanced through this process should reduce the traffic impact to local roads in Andover.

**6. Potential for multiple interchange additions has been addressed.**

The development of this new interchange will not create the need for multiple new interchanges in the Andover region.

**7. Coordination between development and transportation improvements is demonstrated.**

Coordination between the anticipated build-out and the transportation improvements planned for the new interchange are critical. Specifically, any advanced study should review and quantify the possibility for reclassification of additional land surrounding the study area and take into account the impact of traffic from that development on local roads in Andover.

**8. Request for new access contains information on environmental processing.**



Although all alternatives provided a preliminary review of the environmental process, the data used was based upon aerial photography and MassGIS data layers. As such the analysis of environmental impacts is very limited and requires advanced study. The LJITF understands that any alternatives advanced for further study will have to go through both state and federal environmental review, and we reserve the right to provide additional comment at that time.

**b. Additional Traffic data requested of MVPC**

- **Dascomb Road Traffic Study, Impacts and Mitigation**

Dascomb Road serves as access to both I-93 North and south at Exit 42 in Andover. The traffic that impacts the neighborhoods in BallardVale and eventually makes its way to Lowell Junction all begins as commuters exit I-93 at Dascomb Road. The result is that established residential neighborhoods which surround Dascomb Road are as impacted by commuter traffic as any in Andover. Recent signalization of Dascomb and Lovejoy Road helps to improve safety for pedestrians as they cross the busy road, but over the past few years accidents between pedestrians and vehicles have continued to occur. The traffic data provided by VHB shows that under different interchange alternatives Dascomb Road can be either positively or negatively impacted. Although the differences in volume projected between Alternatives 3, 4 & 9 at the 2025 build-out are minimal, any interchange design that moves forward should provide mitigation in the form of traffic calming, improved crosswalks and additional signalization along Dascomb Road. The LJITF recommends that Dascomb Road continue to be included in the traffic studies provided for any of the advanced alternatives, and that protection of pedestrian in and around this busy road remain a top priority.

- **BallardVale Traffic Study, Impacts and Mitigation**

BallardVale is recognized by both State and Federal Agencies as a unique Historic District. Among other things, BallardVale served as the home to one of the first linen mills in the United States, and continues to be a tight-knit community where residents can walk to work, school, church, the post office and local retail. The

BallardVale Train Station, located on Andover Street, serves area commuters traveling in and out of downtown Boston every day.

Over the past thirty years BallardVale has also served as the unintended primary entrance into the Lowell Junction Area for commuters traveling to and from the region just north of Andover on the I-93 corridor. The narrow roads through this well-established historic mill village were not intended to take the kind of pulse in traffic generated by 6000 employees making shift changes at companies like Wyeth, Gillette, Charles River Laboratories and AGFA. As shown on the data provided by VHB, the result has generated significant failure in LOS for both AM and PM peak hours on Clark Road, Andover Street and River Street.

Although all three of the alternatives that the LJITF voted to advance for further consideration show a reduction in volume from the 2025 no-build condition, the “Diamond Alternative” has a better impact on both Volume and LOS throughout BallardVale than do the “Loop Alternatives”. As shown in the 2025 Peak Traffic Volumes, (*Fig. 3*) the benefit to Clark Road during the AM/PM Peak Hour results is a reduction in volume of 15.3% and 16.2% respectively when compared to the volumes projected for Alternative #9 (*Fig 2.*), the “Modified Loop.” As that table also demonstrates, the benefit of the “Diamond Alternative” (*Fig. 1*) not only extends to Clark Road, but can also be seen on Andover Street, River Street Dascomb Road and BallardVale Street.

VHB’s comparison of all alternatives also carried information regarding preliminary construction costs and environmental impacts (*Fig 4.*), which further recognize a benefit from the “Diamond Alternative” when compared to “the Modified Loop.”

In 2001, the residents of BallardVale secured funding from Andover’s Annual Town Meeting to complete the *BallardVale Neighborhood Improvement Plan*. This 2001 study reviewed the impact of cut-through traffic on the roadways of the village and made recommendations for traffic calming and pedestrian improvements on Clark Road, Andover Street and River Street to mitigate the impact of this industrial and office traffic bound for Lowell Junction. The final recommendations of the study included specific improvements aimed at “*Improving pedestrian safety, and reducing vehicular speed to the posted limit in the center of*

*BallardVale.*” To achieve this end, the study made the following specific recommendations:

- Curbing, street trees, sidewalk and crosswalk improvements to Clark Road.
- Installation of sidewalks and curb on at least one side of River Street. The walk should be extended from Andover Street to Laconia Drive.
- Textured crosswalks at Clark/Andover, Andover/Tewksbury and Andover/River Street such as brick, cobblestone or stamped concrete.
- Ornamental street lights, street trees and benches throughout the center of the village to enhance the pedestrian scale and discourage speeding.

Although the LJITF is working hard to insure that Andover gets the right interchange for Lowell Junction, the future impacts of traffic from expanded development of the Lowell Junction Area will continue to have an impact on BallardVale. Any final interchange design which moves forward should include funding for offsite mitigation to improve traffic conditions and pedestrian safety throughout BallardVale, while also respecting the integrity of this unique Historic District.

- **Route 125 Traffic Study Impacts and Mitigation**

The current draft of the Interchange Justification Study Report does not contain analysis of how the Route 125 corridor and neighborhoods would be impacted under the various interchange alternatives, Northeast of Andover Street. In particular, the Loop Alternative that is associated with 750, 000 square-foot Mall, and which is assumed by the study, does not contain volume or level of service data for peak hour periods for any of the following key residential intersections:

- Route 125 at Route 28
- Route 125 at Gould Road
- Route 125 at Wildwood Road
- Route 125 at Salem Street

Residents of these neighborhoods and the Town of Andover are entitled to know what the level of service and traffic volume impacts could be on these streets and intersections. The LJITF looks forward to seeing these estimates and data presented as soon as possible. Depending on the results of the further study of trip generation and level of service impacts at Route 125 intersections, specific mitigation strategies may need to be prepared.

### **c. Land Use and Build-Out Implications**

Beyond the issue of reviewing traffic volume and service level information and forecasts prepared by VHB for the Draft IJR associated with each of the interchange alternatives, Andover needs to begin to assess the land use and quality-of-life consequences that are raised by allowing any of the various interchange concepts to move forward.

The Draft IJR makes important growth assumptions about development in the Lowell Junction Area that deserve serious scrutiny. Specifically, the 3.38 million square feet of new development that is forecasted for the area surrounding the east and west sides of the interchange should be examined in more detail. Of this estimated 3.38 million square feet, 1.71 million square feet is forecasted to occur on the west side of I-93. Importantly however, the IJR did not make any assumptions about the potential reclassification of residential land on the west side in Tewksbury or Wilmington to commercial zoning designations. Such rezoning of residential land could have major PM peak hour trip generation consequences for Andover.

Further, the Sutton Brook Landfill site is not assumed for any redevelopment potential in the build out scenarios of the draft study. Based on other redevelopment in the region of contaminated or formerly contaminated properties, the LJITF believes there is the potential for reuse of this site for nonresidential purposes. If one assumes, conservatively, that approximately 30 acres of residential land could be reclassified to commercial use, and developed at a Floor Area Ratio (FAR) of .25, approximately 327,000 square feet could result. Applying the ITE trip rate code 820 for general retail that has been used in the IJR, significant additional trip generation could result, even when accounting for shared and pass-by trips.

Once an alternative such as the “Modified Loop” is constructed, or even interchange alternative 4B, one that allows traffic volume from commercial land uses to enter BallardVale/Andover roads with no connection to the existing roadway network in Tewksbury or Wilmington, other commercial development may be facilitated. This would include the likely entrance of additional traffic from future land uses in

Wilmington, as well as additional development potential west of the Perkins property in Tewksbury. Because both of these neighboring towns may be insulated from the trip generation from this future development accessing their local roadway system, Andover needs to be prepared for becoming the primary bearer of the consequences from additional rezoning and commercial development to the south and west of the proposed Mills Corporation mall site. .

In 2004, the Vision 21 Committee prepared a “Vision for the Town of Andover” report that articulated important goals, strategies, and objectives for the future evolution of Andover. An Andover Community Development Plan was also prepared at this time. While not a substitute for a Comprehensive Plan or Master Plan, the Vision and Community Development Plan together establish important goals for nurturing and protecting the Town’s character, economic base, and quality-of-life. Key shared values and strategies in the Vision report were advanced that included: quality education, open space and recreation resources, a vibrant downtown, sound management of natural resources, preserving small-town character, financial stability, cultural diversity, citizen participation, town and human services, healthy and safe environment, and transportation. Five of the subject areas, shown below, intersect directly with land use:

- Small-town character
- Vibrant downtown
- Open space and recreation resources
- Management of natural resources, and
- Transportation.

When read together, Andover’s Vision document and Community Development Plan attempt to strike a balance between nurturing the Town’s existing tax base, and promoting economic development and housing affordability, while protecting and enhancing the Town’s quality-of-life. Transportation and infrastructure present particular challenges, especially since Andover seeks to both reduce traffic congestion in neighborhoods, while improving circulation in the Town’s existing and future industrial areas.

In terms of the transportation element of the Vision, the following statement was offered: *“We will encourage foot and bicycle travel as an alternative to automobiles, whenever feasible.”* Further, the vision statement included the following strategy statement: *“Advocate for public transit and highway access that reduces traffic in and through residential neighborhoods.”*



A key question for Andover residents raised by the transportation element of the Vision document is the following: Do residents want all the new trip generation attributable to new development on the west side of I-93 to have access only to I-93 or existing Andover roadways, with no access to existing roadways in Tewksbury or Wilmington? The LJITF, while supporting creation of a new interchange to reduce traffic in BallardVale, believes that there is risk associated with an interchange option such as the “Modified Loop” or the recently considered alternative 4B that removes access to South Street in Tewksbury. This risk could involve the eroding of the promised benefits to be achieved by new highway interchange access, particularly if all west side development has access to BallardVale roadways, including development from future, additional land use reclassification described above, which could funnel significant trip generation not anticipated in the build-out projections of the Draft IJR.

#### **d. BallardVale’s Commuter Rail Station.**

Throughout the design review process for this new access to I-93 there has been discussion of the possibility for a new commuter rail station and park-and-ride facility in Lowell Junction. The preliminary discussions on this topic were brought forward by the Merrimack Valley Economic Development Council (MVEDC) and their project architect. The vision put forward by the MVEDC (*Fig 5*) presents the opportunity for a centrally located rail station which could benefit business in Lowell Junction and serve commuters going in and out of Boston every day. Although we applaud their efforts and think this idea may have merit, we are concerned that this new station may be intended to replace the existing Commuter Rail Station in BallardVale. The latest movements in Urban Planning, ‘New Urbanism’ and “Neo-traditional Town Planning” extol the virtues of a community built around a multimodal transit system. These are places and neighborhoods in which residents can walk to work, school, parks, retail and services; neighborhoods are connected to more urban environments by rail and rapid transit system. The irony in this is that BallardVale, established in the early 1800s, is a shining example of this type of “modern day” planning. BallardVale, established as a mill community for the manufacture of linen, stoneware, tools, and dyes, still retains its built form today. Indeed, it is recognized as a Historic District on both the State and National Historic Register. BallardVale has a unique place in the history of Andover, and we must insure that it remains as an example of how New England grew from its earliest beginnings. If a new Commuter Rail Station is built in Lowell Junction it must not be at the expense of the existing station in BallardVale.

### **e. Potential Impacts to Andover's Downtown Commercial District**

A report prepared by the Merrimack Valley Economic Development Council a few years ago, entitled "The Junction/Route 93 Development Area," forecasted significant economic, tax base, and job creation benefits from development occurring and being facilitated by a new interchange in the Junction Area. Further, the report states that there is significant leakage of potential retail sales dollars outside the Merrimack Valley to areas such as Salem, New Hampshire. The report includes the following statement:

*"The project proposed by the Mills Corporation will likely capture a significant portion of the Merrimack Valley's sales leakage. Mills Corporation has proposed a differentiated mix of stores and a superior location visible from I-93, which will help attract Merrimack Valley retail dollars. The experience from Mills Corporation projects nation-wide supports this notion, as Mills consistently attracts shoppers from a wider area than is typical in the industry."*

The report referenced above, however, does not scope the potential of the Mills mall to impact sales normally captured by downtown Andover. However, the LJITF believes that it is possible, despite significant local shopping loyalty to downtown merchants, that some loss of specialty retail sales in downtown Andover will result from the new available mix of retail that may be offered at a future mall site within only a few miles from Andover's downtown.

In the report "Development Review: Tewksbury Mills Regional Mall" prepared in 2004 by Community Opportunities Group, Inc., for the Town of Tewksbury, the consultant offered the following observation and conclusion based on local retail impacts attributable to shopping malls:

*"Shopping malls with large, anchor tenants and national or regional chain stores do not always compete directly with small retail establishments. The effects of a new shopping and entertainment facility in Tewksbury may have little adverse impact on other local retailers. Actual outcomes will depend on the final mix of retail establishments at Tewksbury Mills, the extent to which these establishments compete with local retailers, and the capacity of local retailers to reposition themselves under new market conditions. It is more likely that a traditional business district with more retail diversity than Tewksbury has will experience the effects of a new shopping center. For example, despite the attractiveness and apparent vitality of downtown Andover, per capita retail sales in Andover are quite low and the town's retail location quotient is very low. These indicators suggest that Andover may already lose potential sales to other communities."*

Because of the time constraints imposed on the LJITF, based on a tight deadline for public comment on the Draft IJR, it is impossible for a thorough investigation of the potential impacts to downtown Andover associated with each of the interchange alternatives that are being explored. Since each of the “Loop Alternatives” facilitates development of a regional Mall, it is likely that these options could exert some negative sales revenue impact to downtown Andover. Further, the Diamond alternative 4B, with no connection to South Street in Tewksbury, could also facilitate development of a regional mall and associated retail development, and cause a similar impact. Clearly, further study of the potential loss of retail sales revenue by downtown Andover businesses is desirable.

## **f. Potential Environmental Impacts**

The Draft IJR scopes the environmental impact associated with each of the interchange alternatives at a very conceptual and superficial level. Most of the environmental information used by the consulting firm analyzing the different interchange alternatives relied upon GIS data derived from state sources, and not from on-site or field investigations. A more detailed assessment, including complete environmental impact report preparation will be required to be conducted in relation to any alternative that is recommended for potential funding or design. Such review will occur should any of the interchange alternatives be advanced by the Massachusetts Highway Department and the Federal Highway Administration.

For purposes of this report, the LJITF relied upon publicly available information, and information from 1994 Massachusetts GIS maps.

Recent flooding problems in the region illustrate the consequence of creating more impervious surface area associated with future roadway construction and land development. Such construction will contribute to increased storm water runoff that will need to be handled and managed. Open space and vegetation surrounding the interchange areas benefit environmental and air quality. Smart growth development approaches require the balancing of concerns about protecting the natural environment with appropriate consideration of the rights of private property owners. Future planning for any interchange alternative requires further study and serious evaluation of the long-range environmental impacts and consequences not only from construction of the interchange itself, but also the type of development that such interchange facilitates. The following findings are offered:

### **Alternative #1.**

No interchange created. Traffic in BallardVale would be expected to increase, and air quality could be compromised.

**Alternative#2.**

No interchange created. Potential wetland and conservation land intrusion, and assuming traffic increases in BallardVale, air quality could be compromised.

**Alternative #3: The Trumpet Design**

Creates both north and south access to I-93, but no west access to existing roadways in Tewksbury. Limited amount of impervious surface created when compared with other interchange alternatives. Minimal intrusion of wetland or conservation land by Jenny's Way. Least environmental impact.

**Alternatives #4, #5, #6: The Diamond Designs**

**Alternative #4 - Diamond with access to South Street**

This design is a full-service interchange that is fairly compact with a roadway extension to South Street. This alternative brings the highway closer to a residential neighborhood (Jenny's Way), but creates an interchange that is pulled father away from the Shawsheen River, and has less impervious surface area than do the Loop interchange alternatives. Some wetlands and conservation land impact may occur.

**Alternative #5 - Diamond with access to Salem Street**

This alternative is similar to Alternative #4, but includes a long access roadway extending south to Salem Street. Such roadway extension creates more impervious surface, construction impacts, and greater impact to wetland areas and conservation land.

**Alternative #6 - Diamond with access to Route 125 Interchange**

This alternative involves extending an access road south to the Route 125 interchange. The concept also would require a railroad crossing and the potential crossing of significant wetland resource area.

**Alternatives #7, #8, #9: The Loop Designs**

All three Loop plans create the most impervious road surface and represent the largest overall construction programs. The Loop designs appear to facilitate the most significant build-out of land in the area, but also provide easier access to the Sutton Brook disposal site.

**Alternative #7:** Requires two separate highway bridge crossings, including a bridge crossing very close to the Shawsheen River.

**Alternative #8:** Similar to alternative #7, except that it includes a ramp crossing of the Shawsheen River, and an access road extending to Dascomb Road, creating greater impact to wetlands and the watershed.

**Alternative #9:** Eliminates the bridge crossing of the highway by the Shawsheen River, and proposes one large, curved bridge crossing into the BallardVale industrial area. Significant roadway and impervious surface area, but less impact to wetlands.

#### **4. SUMMARY**

The benefits to Andover from the construction of a new interchange on I-93 in Lowell Junction are tremendous. For the last 30 years the residents and businesses in Andover have discussed the need for a new access to the Lowell Junction area to help boost the economic tax base and relieve the pressure on local roads in neighborhoods surrounding Lowell Junction. Never before has the effort to propose a new interchange garnered the kind of support that this revitalized effort has received over the last several years. However, Andover must be cautious about accepting a new interchange at any price. The Lowell Junction Interchange Task Force (LJITF) has raised some serious concerns about the impacts which could result from an interchange which does not evenly distribute the benefits and impacts amongst all the affected communities. The following points represent the goal and objectives which the LJITF felt should be realized by the development of a new interchange in Lowell Junction. (described earlier in the report as “review criteria”)

- Provide immediate and direct access from Route 93 to existing businesses in the Lowell Junction Area.
- Improve traffic conditions in existing residential neighborhoods and collector roads adjacent to the Lowell Junction Area.
- Maximize the economic development potential for the Lowell Junction Area, while insuring that the preferred alternative protects the environment and enhances the overall quality-of-life for all residents.
- Avoid deterioration of level of service benefits obtained or expected from recently improved intersections and roadway projects.
- Avoid adverse impact to Andover’s vibrant Downtown Commercial Area.
- Avoid excessive construction cost and/or long-term maintenance cost for the Town of Andover.



The initial review we have completed with the drafting of this report is just the beginning of a long design, engineering and review process in the development of a new interchange. The Town of Andover must be ready to provide educated and thoughtful input into this continued evaluation. In that regard the **LJITF recommends the Town of Andover initiate the process for a new Comprehensive Master Plan.** The last Comprehensive Master Plan prepared by the Town was completed in 1992. Much has changed since that time, including the continued growth of the Lowell Junction area, the Town's purchase of the Reichhold Chemical property, the renovation of the High School and the construction of a new Public Safety Center for both Fire and Police. As the Town of Andover weighs in on the important implications of a new interchange in Lowell Junction we should do so with the benefit and understanding of how the Town intends to grow as a whole.

The other fact which became obvious to the LJITF is that the review of these matters requires the benefit of the professional experience of an independent Traffic Engineer. Although the individual members of the LJITF have a broad range of experience in dealing with many similar issues, we felt we were being re-active when maybe we could have been more pro-active in serving Andover's interest. **The Town of Andover should hire an independent Traffic Engineering firm to represent the Town's interests as the design of the new interchange moves forward.** That is not to say that this LJITF should be dissolved, but rather this Task Force should have the benefit of the experience of a professional engineering firm to help us suggest design modifications which will provide increased benefit and mitigation to the Town of Andover.

In closing, the LJITF finds it is important that the Town of Andover secure a new interchange on I-93 in the Lowell Junction region. However, as important as the new interchange may be, Andover needs the right interchange. The wrong interchange and associated roadway design could facilitate unintended sprawl of retail/commercial growth in neighboring communities, and Andover's local roads may well become the only outlet for the traffic impacts associated with that expanded growth.

## **5. ATTACHMENTS**